

GUIDELINES FOR THE ASSESSMENT OF RADIONUCLIDE TESTING

When assessing alpha or gamma spectrometry, determine if the method is measuring a gross count, or if individual isotopes can actually be determined. Ensure that the parameter listing accurately reflects what the method is actually measuring. If the method is actually measuring a gross count, then it is acceptable to list *gross alpha activity* or *gross beta activity* under the parameter listing.

Ensure that the method reference has an actual instrument book or text book cited. As with other test methods, the method reference should read *based on....* and the instrument book or text book cited.

Appendices are not based solely on instrumentation. The definition of an appendix is a unique matrix-test method combination, and a method (in turn) is defined in terms of analytical technique and sample preparation. Therefore, if a method calls for chemical separation, distillation, or co-precipitation, etc...then each unique combination of chemical technique-instrument is a separate appendix. For example, even though both Polonium-210 and Thorium are detected by alpha spectrometry, they require a chemical separation. So, Polonium-210 and Thorium should be listed as two separate appendices - not two analytes in one appendix.

For appendices where actual radionuclides are determined and the list of analytes is extensive, a lab should list its standard list of analytes. For example, in the case of gamma spectrometry where actual radionuclides are determined, it would be more appropriate to list a standard list of analytes rather than state *gamma emitters*.